CLAIMS

What is claimed is:

1. A method for filtering a video synchronization signal sent from a remote computer to a plurality of graphics processing computers, each graphics processing computer having at least one graphics processing card and a sync filter, comprising the steps of:

receiving a stream of at least n sync signals from the remote computer;

storing the most recently received n sync signals in an array;

comparing an n + 1 sync signal with each of the n sync signals in the array to form a comparison for each of the n sync signals in the array;

replacing an oldest of the n sync signals in the array with the n + 1 sync signal; and

using the n+1 sync signal to synchronize the at least one graphics processing card in each graphics processing computer with each at least one graphics processing card in the plurality of graphics processing computers if the comparisons of the n sync signals in the array are greater on the average than a preset threshold.

2. A method as in claim 1, wherein the step of receiving an array of n sync signals includes the more specific step of receiving the array of n sync signals at one or more remote computers.

3. A method as in claim 2, wherein the one or more remote computers are used to generate graphical images.

4. A method as in claim 1, wherein the step of comparing an n+1 sync signal with each of the n sync signals includes the more specific steps of:

computing a vote for each of the comparisons of the n sync signals in the array;

averaging the votes of the n sync signals in the array; and

using the n+1 sync signal if the average vote of the n sync signals in the array is greater than a preset threshold.

5. A method as in claim 4, wherein the step of receiving an array of n sync signals includes the more specific step of initializing a filter with an array of n time stamps of the n sync signals.

6. A method as in claim 5, wherein the step of computing a vote for each comparison is further comprising the steps of :

computing a time difference between an n time stamp in the array of n time stamps and an n+1 time stamp;

finding a comparison time that is an absolute time nearest to the n time stamp by subtracting an integer multiple of a base time period until the comparison time is within plus or minus one half of the base time period;

comparing an absolute value of the comparison time with a known-bad threshold wherein a vote of zero occurs if the difference exceeds the known-bad threshold; and

computing the vote as a linear interpolation between zero and the known-bad threshold.

7. A method as in claim 6, further comprising the step of computing the vote as a linear interpolation equal to one minus the ratio of the absolute value of the comparison time that is less than the known-bad threshold and the known-bad threshold.

8. A method as in claim 1, further comprising the step of operating the sync filter in the plurality of graphics processing computers.

9. A method as in claim 8, further comprising the step of operating the sync filter as software in the plurality of graphics processing computers.

10. A system for filtering a video synchronization signal from a remote computer with a sync filter, comprising:

a dedicated network for sending sync signals from the remote computer to a plurality of graphics processing computers, each graphics processing computer in communication with a sync filter, wherein the filter is comprising:

the sync filter with a memory device configured to store an array of n sync signals;

the sync filter with a processor configured to compare an n+1 sync signal with each of the n sync signals in the array to form a comparison for each of the n sync signals in the array;

the processor, further configured to replace an oldest of the n sync signals in the memory with the n + 1 sync signal; and

the processor, further configured to send the n + 1 sync signal to synchronize the plurality of graphics processing computers if the comparisons are averagely greater than a preset threshold.

11. A system as in claim 10, wherein the processor is further configured to:

compute a vote for each comparison of the n sync signals in the array;

average the votes of the n sync signals in the array; and

send the n+1 sync signal to synchronize the plurality of the graphics processing computers if the average vote of the n sync signals in the array is computed to be greater than a preset threshold.

12. A system as in claim 11, wherein the memory is further configured to store an array of n time stamps of the n sync signals.

13. A system as in claim 12, further comprising:

the processor, further configured to compute a time difference between an n time stamp in the array of n time stamps and an n+1 time stamp;

the processor, further configured to compute a comparison time that is an absolute time nearest to the n time stamp by subtracting an integer multiple of a base time period until the comparison time is within plus or minus one half of the base time period;

the processor, further configured to compare the absolute value of the comparison time with a known-bad threshold wherein a vote of zero occurs if the time difference exceeds the known-bad threshold;

the processor, further configured to compute the vote by performing a linear interpolation between zero and the known-bad threshold, wherein the linear interpolation is equal to one minus the ratio of the absolute value of the

comparison time that is less than the known-bad threshold and the known-bad threshold.